Spam: How can we handle it?

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Contents

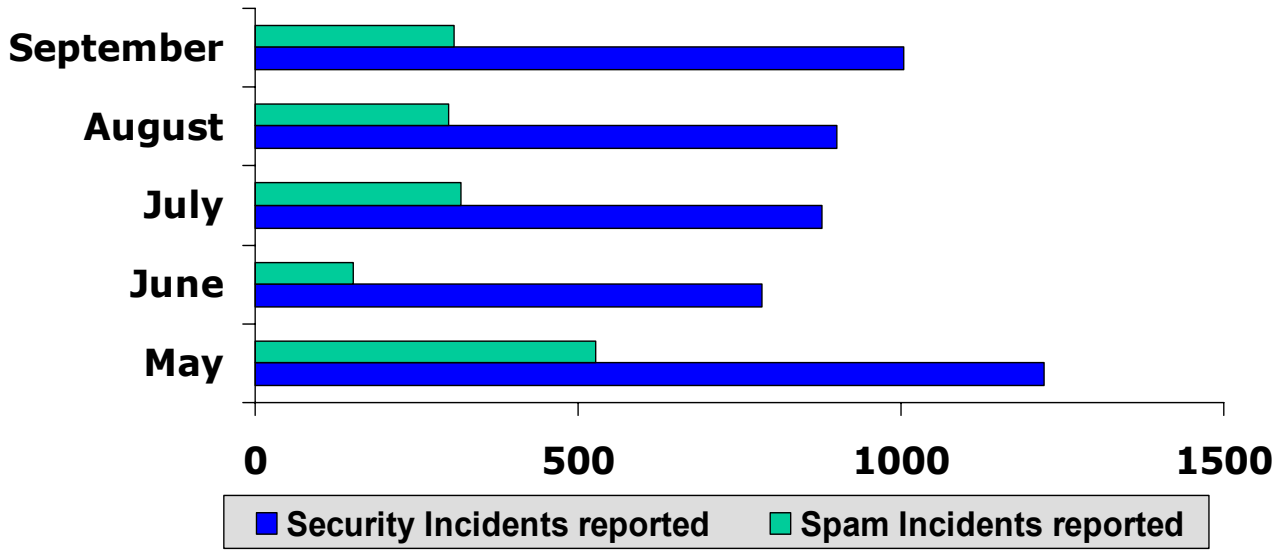
Introduction

- **Spam** is any email message sent to several recipients without their permission or explicitly request.
- **UBE**: *Unsolicited Bulk Email*. It's a formal word that means the same as "spam".
- **UCE**: *Unsolicited Commercial Email.* It's spam which contents are advertisement.
- Why spam is so important nowadays?
  - Spam messages are increasing so fast, polluting mailboxes worldwide;
  - It's taking valuable work time of users and administrators;
  - It's wasting bandwidth, email servers CPU time and so on.

Motivation

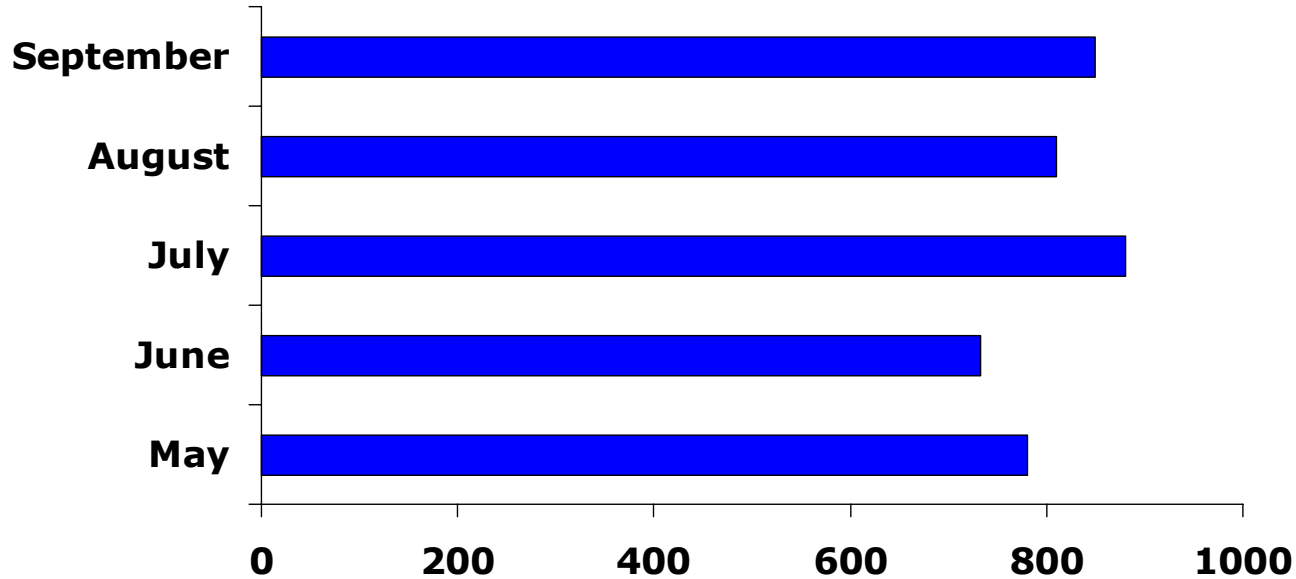
- 1999: CAIS shouldn't handle Spam.
- Spam occurrences have been growing for the last two years;
- Nowadays, almost 30% of all security incidents handled monthy by CAIS are Spam related issues:
  - open relays;
  - anonymous proxies;
  - system and network administrators who don't know how to deal with spam;
  - convinced spammers sending threats, advertisement or some other junk e-mail;
  - people who don't know what spam is and think that Internet is a "powerful marketing media" ...

Statistics



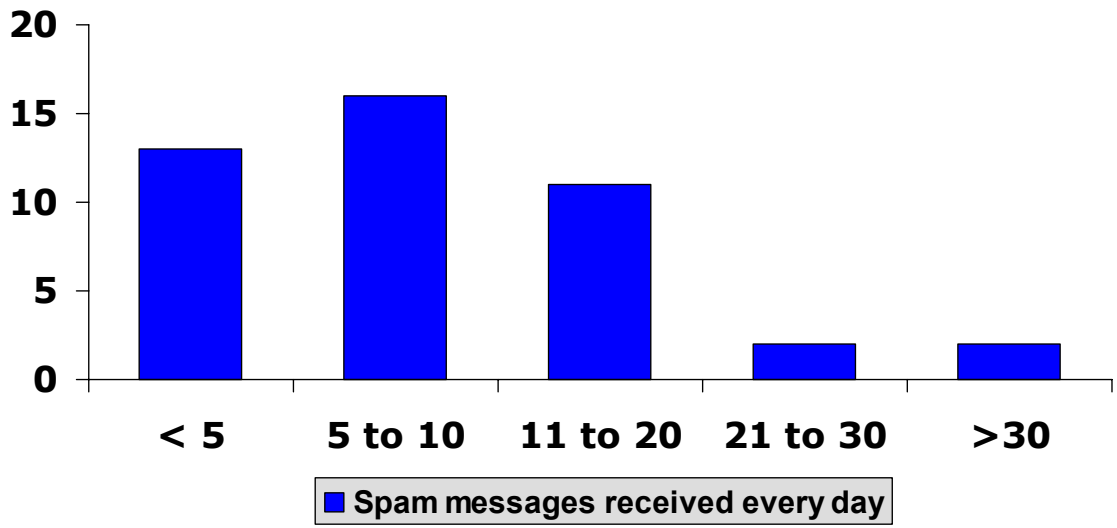
- Security incidents handled by CAIS last months, and Spam incidents on the same period.

Statistics



- Amount of Spam reported by RNP staff during last months.

Statistics



- Results of a quick Spam poll, answered by RNP Staff on May, 2002:

How many Spam messages do you receive every day?

How CSIRTs should handle Spam and related issues?

- Recommending best practices in order to correctly and securely configure mail servers, mail clients and proxies; email security policies and so on.
- Assisting and training network administrators on operational, technical and political procedures about spam:
  - Anti-relay configuration: mail servers and proxies
  - Header analysis basics
  - abuse@ and security@ implementation
  - How to report a spam and how to answer a spam incident report
  - How to train your users and administrators
  - Define and implement email policies

An Overview of technical solutions

- RBLs, Real-time Blackhole Lists: MAPS, ORDB,…
- Define *Private Blackhole lists* with local spammer domains, networks, IPs or emails.
- Questions: Filter or not filter? How to filter? Where?
- It's recommended to use some filter solution:
  - RNP objective: public domain or freeware software.
  - Some options: Spamassassin, Bayespam, Bogofilter, Milter, Procmail, etc

An Overview of technical solutions

- Important issues to be considered to choose a filter solution:
  - CPU utilization;
  - How many mail users do you have;
  - How does filter software fit to your MTA software;
  - Filter customization;
  - Network and mail service performance impact;
  - Filter performance: amount of Spam filtered;
  - Amount of false positives generated.

How does CAIS deal with Spam?

- Operational procedure: forwarding all spam complaints to the related network administrators.
- Assist network administrators on handling spam complaints.
- Technical recommendations:
  - RBLs + Private RBL + Filter (Qmail + ...) or (Sendmail + ...)
- Email policy
- User education
- Network administrator awareness

How does CAIS deal with Spam?

- Best practices:
  - Correct and secure configuration of mail servers and proxies
  - Secure email usage (Internet downloads, attached files)
  - Users shouldn’t answer a spam message
  - Configure an automatic reply for filtered messages.
  - Define a spam handling procedure and inform all users about it.

Conclusions

- Filters usage is a controversy issue, however they are becoming necessary.
- It’s important to define and disseminate procedures in order to handle spam.
- Train users and network administrators about email security policies and other best practices.
- There isn’t a standard solution for all spam problems. There isn’t a miracle that eliminate all spam on your network. The only way is to find technical and comportamental procedures which could minimizes spam impacts.
- CSIRTs should be aware of spam problems, they should assist network administrators of its constituency, train them on best practices, secure configurations and security policies.

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